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Dr. Joshua Lederberg
President
The Rockefeller University
1230 York Avenue
New York, New York 10021

Dear Dr. Lederberg,

I greatly enjoyed our conversation two weeks ago. Your comments were incisive, despite your physical discomfort. I am pleased to hear from Marty that your shoulder has healed. I will try to be brief:

1. Regarding sequence specificity of UV-damage. As I now understand it, sequence affects the distribution of damages both directly and indirectly. Directly, the sequence TTTTTT can form five dimers, while TATATA can form none. Indirectly, the primary structure may also determine the distribution of chromosomally-bound proteins. Despite my fondness as a bacteriologist for site-specific binding proteins and the isolation of a sequence-specific binding protein in Drosophila by Gehring and coworkers, I had not previously considered the possible implications of site-specific binding to repair of DNA in chromatin. Since our talk, I located two very recent papers on nucleosome-induced reduction in pyrimidine dimer formation. Although the experiments in my proposal on repair in specific sequences of animal DNA are internally controlled for levels of DNA damage, I expect also to use the system to investigate the effects of chromatin structure on damage, as Tom Cech has with mitochondria. I will use mouse cells containing amplified dihydrofolate reductase genes to generate a high enough concentration of specific sequence in the nuclear chromatin to recognize a short sequence on a gel. This may permit me to look at the effect of damage at a specific site in a gene on repair. I will inform you if anything interesting comes of my projected talk with Bill Haseltine.

2. I was impressed by your seminar room: visible screen, adequate slide magnification, voice amplification. I was unable to stay for the whole seminar on viral transcription. I also liked the hospital layout and look forward to helping Marty design his research wing.

3. I enclose a copy of my senior thesis from college for your unrestrained criticisms and comments, especially on the description and analysis of the experience. I have learned a lot about data presentation in the ensuing seven years. My aim was to learn how to recreate the conditions leading to

discovery, and I fully agree with your view on the evanescence of experience. That is why serious criticism is so valuable to me.

At the recent Symposium on Chromosome Breakage and Neoplasia, someone described Boveri as a god in genetics. James German later replied that in his view, Boveri was a muse; McClintock was a god. I see you right alongside McClintock. Hang in there; I look forward to future meetings.

With warm personal regards.

Sincerely,

Peter Ross

Peter M. Ross

PMR/goc
P.S. I am enclosing another revision of my vita for you to proofread.